

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

Conditional Major, Construction / Operating

Permit: F-06-066

Marathon Petroleum Marine Repair Terminal

Catlettsburg, KY 41129

Date: January 17, 2007

Sukhendu K. Majumdar, Reviewer

SOURCE ID: 21-019-00016

SOURCE A.I. #: 35218

ACTIVITY ID: APE20060001

**SOURCE DESCRIPTION:**

Marathon Petroleum Company LLC operates a Marine Terminal (MRT) in Catlettsburg, KY. The facility submitted a Title V operating permit application in 1998, based on the potential-to-emit (PTE) for volatile organic compounds (VOC) of greater than 100 tons per year. The Title V permit was issued by the Division for Air Quality in December 22, 1999. A permit renewal application was submitted by the facility six months before the expiration of the permit in 2004. After several reviews of the application DAQ suggested to develop a calculation methodology to estimate barge “degassing” emissions during the barge cleaning cycle. Based on the new emission estimation, it was determined that the facility qualifies for the Federally Enforceable State Operating Permit (FESOP). Marathon Petroleum Company LLC submitted revised application for Marine Repair Terminal at Catlettsburg on October 19, 2006.

The primary function of the Marine Repair Terminal is to clean and repair barges which are used to transport petroleum products in the water ways. On arrival at the MRT, the residual product from barges is transferred into a storage tank and the barge is “degassed” using blowers. Degassing is considered the drying of gasoline and other petrochemical products from the barges. Depending on the prior barge service, vapors from the degassing are either routed to a natural gas fired thermal oxidizer for VOC destruction or to the atmosphere.

The Marathon Petroleum Marine Repair Terminal consists of:

- a) Two natural gas fired boilers to provide hot water to warm wash the barges.
- b) One natural gas fired thermal oxidizer to reduce VOC and HAP emissions.
- c) Two internal floating roof tanks to store and separate oil and water.
- d) Two internal floating roof tanks to store light and/or heavy oil rerun.
- e) Three horizontal tanks used to store Distillate #2.
- f) One horizontal tank to store lube oil.
- g) One Barge Loading Station.
- h) One Barge Cleaning Station.
- i) Waste Water treatment plant.

The MRT used to perform painting and truck loading, but these operations are no longer performed in the location.

**CONTROL AND EFFICIENCY:**

To control the emissions from the degassing of the gasoline and petrochemical transported barges, a natural gas fired thermal oxidizer was installed in the year 2000. The design efficiency of the thermal oxidizer is 90.0%. The average destruction efficiency of three tests conducted on January 11, 2002 was 99.6% for the thermal oxidizer. The oxidizer shall be operational during gasoline and light hydrocarbon (benzene) degassing and barge cleaning cycle.

**APPLICABLE REGULATIONS:**

1. 401 KAR 59:015- for the new indirect heat exchangers (Thermal Oxidizer B-1, Boiler B-3, B-2)
2. 401 KAR 61:045 and 401 KAR 61:050 for existing oil-effluent water separators (WWT) and for existing storage vessels for petroleum liquids (TK-1 through TK-8).

**EMISSION AND OPERATING CAPS DESCRIPTION:**

Marathon Petroleum Company LLC Marine Repair Terminal has requested a Conditional Major Permit. Pursuant to 401 KAR 52:030, the facility shall maintain the VOC emission below 90 tons per year, single Hazardous Air Pollutant (HAP) shall be below 9.0 tons per year and combined HAPs shall be below 22.5 tons per year.

**PERIODIC MONITORING:**

Performance of the thermal oxidizer shall be monitored to comply with the 90.0% of the major source threshold limits for VOC and HAPs. Natural gas usage for the boiler and thermal oxidizer shall be monitored and recorded.

**OPERATIONAL FLEXIBILITY:**

None

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.